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Docket No.: 532622010400

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Michael KOCK et al.

Examiner: Not Yet Assigned
Group Art Unit: Not Yet Assigned

Serial No.: To be assigned

Filing Date: Concurrently herewith

For: NOVEL SELECTION PROCESSES

**INFORMATION DISCLOSURE
STATEMENT UNDER 37 C.F.R. § 1.97 & 1.98**

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. §1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO/SB/08a/b. Copies of foreign documents and non-patent literature are submitted herewith. The Examiner is requested to make these documents of record.

This Information Disclosure Statement is submitted with the application; accordingly, no fee or separate requirements are required.

Applicant would appreciate the Examiner initialing and returning the Form PTO/SB/08a/b, indicating that the information has been considered and made of record herein.

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In the unlikely event that the transmittal form is separated from this document and the Patent Office determines that an extension and/or other relief (such as payment of a fee under 37 C.F.R. § 1.17 (p)) is required, Applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing 532622010400.

Dated: January 25, 2005

Respectfully submitted,

By: 
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U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
1.	US-5,180,873		1/19/1993	Jorgensen	
2.	US-5,254,801		10/19/1993	Dotson et al.	
3.	US-5,358,866		10/25/1994	Mullen et al.	
4.	US-5,426,041		6/20/1995	Fabijanski et al.	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)			
5.	EP-0595873-B1		4/5/2000		abstract
6.	EP-0716147-A2		6/12/1996		✓
7.	WO-93/01281		1/21/1993		abstract

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NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
	8.	L. Andersen et al. (1989) "Pyrimidine, Purine and Nitrogen Control of Cytosine Deaminase Synthesis in Escherichia coli K 12. Involvement of the glnLG and purR Genes in the Regulation of codA Expression," <i>Arch. Microbiol.</i> 152, pp. 115-118			
	9.	C. Beclin et al. (1993) "Potential Use of the aux2 Gene from Agrobacterium Rhizogenes as a Conditional Negative Marker in Transgenic Cabbage," <i>Transgenic Research</i> 2, pp. 48-55			
	10.	John E. Bennett. "Antimicrobial Agents" Chapter 50 In Goodman and Gilman's The Pharmacological Basis of Therapeutics. Alfred Goodman Gilman, Theodore W. Rall, Alan S. Nies, and Palmer Taylor, Pergamon Press, New York, pp. 1165-11181.			
	11.	C. Besnard et al. (1987) "Selection Against Expression of the Escherichia Coli Gene gpt in hprt ⁺ Mouse Teratocarcinoma and Hybrid Cells," <i>Molecular and Cellular Biology</i> 7(11), pp. 4139-4141			
	12.	V. Blanc et al. (1996) "Control of Gene Expression by Base Deamination: The Case of RNA Editing in Wheat Mitochondria," <i>Biochemie</i> 78, pp. 511-517			
	13.	J. Canaday et al. (1992) "Organization and Functional Analysis of Three T-DNAs from the Vitopine Ti Plasmid pTiS4," <i>Mol. Gen. Genet.</i> 235, pp. 292-303			
	14.	E. Cecchini et al. (1998) "Characterization of Gamma Irradiation-Induced Deletion Mutations at a Selectable Locus in Arabidopsis," <i>Mutation Research</i> 401, pp. 199-206			
	15.	C. Chuang et al. (2000) "Specific and Heritable Genetic Interference by Double-stranded RNA in Arabidopsis thaliana," <i>Proceedings of the National Academy of Sciences of USA</i> , Bd. 97(9), pp. 4985-4990			
	16.	S. Corneille et al. (2001) "Efficient Elimination of Selectable Marker Genes from the Plastid Genome by the CRE-lox site-specific Recombination System," <i>The Plant Journal</i> 27(2), pp. 171-178			
	17.	K. Cornell et al. (1996) "Affinity Purification of 5-Methylthioadenosine Kinase and 5-			
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	Methylthioribose/S-Adenosylhomocysteine nucleosidase from Klebsiella pneumoniae," <i>Biochem J.</i> 317, pp. 285-290	
18.	M. Czako et al. (1994) "The Herpes Simplex Virus Thymidine Kinase Gene as a Conditional Negative-Selection Marker Gene in Arabidopsis thaliana," <i>Plant Physiol.</i> 104, pp. 1067-1071	
19.	L. Damon et al. (1989) "Enhancement of 5-Fluorouracil Antitumor Effects by the Prior Administration of Methotrexate," <i>Pharmac. Ther.</i> 43, pp. 155-185	
20.	A. Depicker et al. (1988) "A Negative Selection Scheme for Tobacco Protoplast-Derived Cells Expressing the T-DNA Gene 2," <i>Plant Cell Reports</i> 104, pp. 1067-1071	
21.	R. Donald et al. (1996) "Insertional Tagging, Cloning, and Expression of the Toxoplasma gondii Hypoxanthine-Xanthine-Guanine Phosphoribosyltransferase Gene," <i>The Journal of Biological Chemistry</i> 271(24), pp. 14010-14019	
22.	S. Dotson et al. (1996) "Identification, Characterization, and Cloning of a Phosphonate Monoester Hydrolase from Burkholderia caryophilli PG2982," <i>The Journal of Biological Chemistry</i> 271(42), pp. 25754-25761	
23.	S. Dotson et al. (1996) "A Phosphonate Monoester Hydrolase from Burkholderia caryophilli PG2982 is Useful as a Conditional Lethal Gene in Plants," <i>The Plant Journal</i> 10(2), pp. 383-392	
24.	S. Endo et al. (2002) "A New GST-MAT Vector Containing both ipt and iaaM/H Genes Can Produce Marker-free Transgenic Tobacco Plants with High Frequency," <i>Plant Cell Rep</i> 20, pp. 923-928	
25.	N. Fedoroff et al. (1993) "A Versatile System for Detecting Transposition in Arabidopsis," <i>The Plant Journal</i> 3(2), pp. 273-289	
26.	M. Gallego et al. (1999) "Positive-negative Selection and T-DNA Stability in Arabidopsis Transformation," <i>Plant Molecular Biology</i> 39, pp. 83-93	
27.	V. Gaudin et al. (1995) "Expression of Agrobacterium rhizogenes Auxin Biosynthesis Genes in Transgenic Tobacco Plants," <i>Plant Molecular Biology</i> 28, pp. 123-136	
28.	GenBank Acc. No. AB016260	
29.	GenBank Acc. No. AB025110	
30.	GenBank Acc. No. AC079674	
31.	GenBank Acc. No. AF039169	
32.	GenBank Acc. No. AF172282	
33.	GenBank Acc. No. AF253472	
34.	GenBank Acc. No. M12196	
35.	GenBank Acc. No. M13422	
36.	GenBank Acc. No. M61151	
37.	GenBank Acc. No. NC002147	
38.	GenBank Acc. No. V00467	
39.	GenBank Acc. No. V00470	
40.	GenBank Acc. No. X00221	
41.	GenBank Acc. No. X04049	
42.	GenBank Acc. No. X77943	
43.	GenBank Acc. No. M26950	
44.	GenBank Acc. No. U10247	
45.	GenBank Acc. No. NC_003308	
46.	GenBank Acc. No. M60917	
47.	GenBank Acc. No. U44852	
48.	GenBank Acc. No. AF212863	
49.	GenBank Acc. No. J02224	
50.	GenBank Acc. No. M32238	
51.	GenBank Acc. No. S56903	
52.	GenBank Acc. No. U44852	
53.	A. Gleave et al. (1999) "Selectable Marker-Free Transgenic Plants without Sexual Crossing:	

Examiner Signature	Date Considered
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Sheet	3	of	5	Attorney Docket Number	532622010400

	Transient Expression of cre Recombinase and Use of a Conditional Lethal Dominant Gene," <i>Plant Molecular Biology</i> 40, pp. 223-235	
54.	D. Inze et al. (1984) "Genetic Analysis of the Individual T-DNA Genes of Agrobacterium tumefaciens; Further Evidence that Two Genes are Involved in indole-3-acetic acid Synthesis," <i>Mol. Gen. Genet.</i> 194, pp. 265-274	
55.	M. Jacobs et al. (1988) "Isolation and Biochemical Analysis of Ethyl Methanesulfonate-Induced Alcohol Dehydrogenase Null Mutants of Arabidopsis thaliana (L.) Heynh," <i>Biochemical Genetics</i> 26(1/2), pp. 105-122	
56.	D. Janssen et al. (1994) "Genetics and Biochemistry of Dehalogenating Enzymes," <i>Annu. Rev. Microbiol.</i> 48, pp. 163-191	
57.	D. Janssen et al. (1989) "Cloning of 1, 2-Dichloroethane Degradation Genes of Xanthobacter autotrophicus GJ10 and Expression and Sequencing of the dhlA Gene," <i>Journal of Bacteriology</i> 171(12), pp. 6791-6799	
58.	D. J. Jolly et al. (1983) "Isolation and Characterization of a Full-Length Expressible cDNA for Human Hypoxanthine Phosphoribosyltransferase," <i>Proc. Natl. Acad. Sci.</i> 80, pp. 477-481	
59.	G. Karlin-Neumann et al. (1991) "Phytochrome Control of the tms2 Gene in Transgenic Arabidopsis: A Strategy for Selecting Mutants in the Signal Transduction Pathway," <i>The Plant Cell</i> 3, pp. 573-582	
60.	M. Kilstrup et al. (1989) "Genetic Evidence for a Repressor of Synthesis of Cytosine Deaminase and Purine Biosynthesis Enzymes in Escherichia coli," <i>Journal of Bacteriology</i> 171(4), pp. 2124-2127	
61.	L. J. Knoll et al. (1998) <i>Mol. Cell Biol.</i> 18(2), pp. 807-814	
62.	T. Kobayashi et al. (1995) "A Conditional Negative Selection for Arabidopsis Expressing a Bacterial Cytosine Deaminase Gene," <i>Jpn. J. Genet.</i> 70, pp. 409-422	
63.	B. A. Koehlein et al. (1966) "The Metabolism of 5-Fluorocytosine- ² ¹⁴ C and of Cytosine- ¹⁴ C in the Rat and the Disposition of 5-Fluorocytosine- ² ¹⁴ C in Man," <i>Biochemical Pharmacology</i> 15, pp. 435-446	
64.	T. Koprek et al. (1999) "Negative Selection Systems for Transgenic Barley (<i>Hordeum vulgare</i> L.): Comparison of Bacterial codA- and Cytochrome P450 Gene-Mediated Selection," <i>The Plant Journal</i> 19(6), pp. 719-726	
65.	J. Van Herrewege et al. (1980) "Dietary Utilization of Aliphatic Alcohols by <i>Drosophila</i> ," <i>Experientia</i> 36, pp. 846-847	
66.	S. McCormick et al. (1986) "Leaf Disc Transformation of Cultivated Tomato (<i>L. esculentum</i>) Using Agrobacterium tumefaciens," <i>Plant Cell Reports</i> 5, pp. 81-84	
67.	S. McKnight et al. (1980) "Expression of the Herpes Thymidine Kinase Gene in Xenopus laevis oocytes: An Assay for the Study of Deletion Mutants Constructed in Vitro," <i>Nucleic Acids Research</i> 8(24), pp. 5931-5948	
68.	S. McKnight et al. (1980) "The Nucleotide Sequence and Transcript Map of the Herpes Simplex Virus Thymidine Kinase Gene," <i>Nucleic Acids Research</i> 8(24), pp. 5949-5964	
69.	C. Mullen et al. (1992) "Transfer of the Bacterial Gene for Cytosine Deaminase to Mammalian Cells Confers Lethal Sensitivity to 5-fluorocytosine: A Negative Selection System," <i>Proc. Natl. Acad. Sci. USA</i> 89, pp. 33-37	
70.	P. J. Mroz et al. (1993) "Retrovirally Transduced <i>Escherichia coli</i> gpt Genes Combine Selectability with Chemosensitivity Capable of Mediating Tumor Eradication," <i>Human Gene Therapy</i> 4, pp. 589-595	
71.	H. Naested et al. (1999) "A Bacterial Haloalkane Dehalogenase Gene as a Negative Selectable Marker in Arabidopsis," <i>The Plant Journal</i> 18(5), pp. 571-578	
72.	Daniel P. O'Keeffe et al. (1994) "Plant Expression of a Bacterial Cytochrome P450 That Catalyzes Activation of a Sulfonylurea Pro-Herbicide," <i>Plant Physiol.</i> 105, pp. 473-782	
73.	Daniel P. O'Keeffe et al. (1991) "Ferredoxins from Two Sulfonylurea Herbicide Monooxygenase Systems in <i>Streptomyces griseolus</i> ," <i>Biochemistry</i> 30(2), pp. 447-455	
74.	Yasuhiro Ono et al. (1997) "Regression of Experimental Brain Tumors with 6-Thioxanthine	

Examiner Signature	Date Considered
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	and Escherichia coli gpt Gene Therapy," <i>Human Gene Therapy</i> 8, pp. 2043-2055				
75.	Lowell D. Owens. (1973) "Herbicidal Potential of Rhizobitoxine," <i>Weed Science</i> 21(1), pp. 63-66				
76.	Ranjan J. Perera et al. (1993) "Cytosine Deaminase as a Negative Selective Marker for Arabidopsis," <i>Plant Molecular Biology</i> 23, pp. 793-799				
77.	Annemarie Polak et al. (1975) "Mode of Action of 5-Fluorocytosine and Mechanisms of Resistance," <i>Chemotherapy</i> 21, pp. 113-130				
78.	Annemarie Polak et al. (1976) "Metabolic Studies with 5-Fluorocytosine-6- ¹⁴ C in Mouse, Rat, Rabbit, Dog and Man," <i>Chemotherapy</i> 22, pp. 137-153				
79.	Chris M. Preston et al. (1981) "Identification and Mapping of Two Polypeptides Encoded within the Herpes Simplex Virus Type I Thymidine Kinase Gene Sequences," <i>Journal of Virology</i> 38(2), pp. 593-605				
80.	Eddy Risseeuw et al. (1997) "Gene Targeting and Instability of Agrobacterium T-DNA loci in the Plant Genome," <i>The Plant Journal</i> 11(4), pp. 717-728				
81.	Siegfried Salomon et al. (1998) "Capture of Genomic and T-DNA Sequences during Double-Strand Break Repair in Somatic Plant Cells," <i>The EMBO Journal</i> 17(20), pp. 6086-6095				
82.	Helmi R. M. Schlaman et al. (1997) "Effectiveness of the Bacterial Gene codA Encoding Cytosine Deaminase as a Negative Selectable Marker in Agrobacterium-mediated Plant Transformation," <i>The Plant Journal</i> 11(6), pp. 1377-1385				
83.	Gudrun Schroder et al. (1984) "The T-region of Ti Plasmids Codes for an Enzyme Synthesizing Indole-3-acetic acid," <i>European Journal of Biochem.</i> 138, pp. 387-391				
84.	Drew Schwartz. (1981) "Adh Locus in Maize for Detection of Mutagens in the Environment," <i>Environmental Health Perspectives</i> 37, pp. 75-77				
85.	Agnieszka Sekowska et al. (2001) "MtnK, Methylthioribose Kinase, is a Starvation-induced Protein in <i>Bacillus subtilis</i> ," <i>BMC Microbiol.</i> 1:15				
86.	German Serino et al. (1997) "A Negative Selection Scheme Based on the Expression of Cytosine Deaminase in Plastids," <i>The Plant Journal</i> 12(3), pp. 697-701				
87.	Eric J. Sorscher et al. (1994) "Tumor Cell Bystander Killing in Colonic Carcinoma Utilizing the Escherichia coli DeoD Gene to Generate Toxic Purines," <i>Gene Therapy</i> 1, pp. 223-238				
88.	Marty H. St. Clair et al. (1987) "Inhibition of Ganciclovir of Cell Growth and DNA Synthesis of Cells Biochemically Transformed with Herpes virus Genetic Information," <i>Antimicrobial Agents and Chemotherapy</i> 31(6), pp. 844-849				
89.	Jens Stougaard. (1993) "Substrate-dependent Negative Selection in Plants Using a Bacterial Cytosine Deaminase Gene," <i>The Plant Journal</i> 3(5), pp. 755-761				
90.	Venkatesan Sundaresan et al. (1995) "Patterns of Gene Action in Plant Development Revealed by Enhancer Trap and Gene Trap Transposable Elements," <i>Genes & Development</i> 9, pp. 1797-1810				
91.	Thomas Thykjaer et al. (1997) "Gene Targeting Approaches Using Positive-negative Selection and Large Flanking Regions," <i>Plant Molecular Biology</i> 35, pp. 523-530				
92.	A. F. Tissier et al. (1999) "Plant Molecular Genetics-Presentation," <i>Plant Cell</i> 11, pp. 1841-1852				
93.	Linda Thomashow et al. (1984) "Crown Gall Oncogenesis: Evidence that a T-DNA Gene from the Agrobacterium Ti Plasmid pTiA6 Encodes an Enzyme that Catalyzes Synthesis of Indoleacetic Acid," <i>Proc. Natl. Acad. Sci. USA</i> 81, pp. 5071-5075				
94.	Narayana M. Upadhyaya et al. (2000) "The tms2 Gene as a Negative Selection Marker in Rice," <i>Plant Molecular Biology Reporter</i> 18, pp. 227-233				
95.	H. Van Onckelen et al. (1986) "Agrobacterium T-DNA Gene 1 codes for Tryptophan 2-Monoxygenase Activity in Tobacco Crown Gall Cells," <i>FEBS Lett.</i> 198, pp. 357-360				
96.	Michael J. Wagner et al. (1981) "Nucleotide Sequence of the Thymidine Kinase Gene of Herpes Simplex virus type 1," <i>Proc. Natl. Acad. Scie. USA</i> 78(3), pp. 1441-1445				
97.	Michael Wigler et al. (1977) "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells," <i>Cell</i> 11, pp. 223-232				

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98.	Michael Wigler et al. (1979) "DNA-Mediated Transfer of the Adenine Phosphoribosyltransferase Locus into Mammalian Cells," <i>Proc. Natl. Acad. Sci. USA</i> , 76(3), pp. 1373-1376	
99.	E. Wisman et al. (1991) "Genetic and Molecular Characterization of an Adh-1 null Mutant in Tomato," <i>Mol. Gen. Genet.</i> 226, pp. 120-128	
100.	Helen Xiaohui Wang et al. (2001) "Positive-Negative Selection for Homologous Recombination in Arabidopsis," <i>Gene</i> 272, pp. 249-255	
101.	Tetsuji Yamada et al. (1985) "Nucleotide Sequences of the Pseudomonas Savastanoi Indoleacetic Acid Genes Show Homology with Agrobacterium Tumefaciens T-DNA," <i>Proc. Natl. Acad. Sci. USA</i> 82, pp. 6522-6526	
102.	Elena Zubko et al. (2000) "Intrachromosomal Recombination Between attP Regions as a Tool to Remove Selectable Marker Genes from Tobacco Transgenes," <i>Nat. Biotechnol.</i> 18, pp. 442-445	

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